January 1939

Test 329: McCormick-Deering Farmall A (Gasoline)

Tractor Museum
University of Nebraska-Lincoln, TractorMuseumArchives@unl.edu

UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 329

Dates of test: September 28 to October 6, 1939.
Name and model of tractor: McCORMICK-DEERING FARMALL A (Gasoline)
Manufacturer: International Harvester Company, Chicago, Illinois.
Manufacturer's rating: NOT RATED.

B E L T H O R S E P O W E R T E S T S

H. P.	Crank shaft speed R.P.M.	Fuel Consumption			Water used gal. per hr.	Temp. Deg. F.		Barometer Inches of Mercury
		Gal. per hr.	H. P. hr. per gal.	Lb. per H. P. hr.		Cooling med.	Air	
TEST B - 100% MAXIMUM LOAD - TWO HOURS								
18.34	1400	1.569	11.69	0.528	0.067	199	69	29.045
TEST C - OPERATING MAXIMUM LOAD - ONE HOUR								
16.86	1400	1.408	11.97	0.515	0.031	200	75	28.950
*TEST D - ONE HOUR								
16.34	1399	1.404	11.64	0.530	0.209	201	78	29.005
TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)								
16.33	1397	1.415	11.54	0.535	--	201	79	--
1.84	1526	0.661	2.78	2.217	--	200	75	--
8.67	1482	1.006	8.62	0.716	--	196	73	--
16.38	1339	1.376	11.90	0.518	--	195	76	--
4.41	1504	0.754	5.85	1.054	--	202	79	--
12.66	1455	1.250	10.13	0.609	--	199	79	--
10.05	1451	1.077	9.33	0.661	0.135	199	77	29.050

D R A W B A R H O R S E P O W E R T E S T S

H. P.	Draw bar pull pounds	Speed miles per hr.	Crank shaft speed R.P.M.	Slip on drive wheels %	Fuel Consumption			Water used gal per hr.	Temp. Deg. F.		Barometer Inches of Mercury
					Gal. per hr.	H.P. hr. per gal.	Lb. per H.P. hr.		Cooling med.	Air	
TEST F - 100% MAXIMUM LOAD - Second - GEAR											
16.32	1827	3.35	1398	8.98	----- Not Recorded -----				198	78	28.635
TEST G - OPERATING MAXIMUM LOAD											
12.27	2387	1.93	1409	17.49	----- Not Recorded -----				197	87	28.680
14.79	1622	3.42	1400	7.20	----- " " -----				199	75	28.640
14.38	1165	4.63	1404	4.92	----- " " -----				200	76	28.635
13.88	528	9.86	1401	2.17	----- " " -----				193	87	28.660
*TEST H - TEN HOURS - Second - GEAR											
13.11	1434	3.43	1401	7.03	1.365	9.60	0.642	0.054	200	81	28.495

*Formerly called RATED LOAD; see REMARKS 4, page 3.

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FUEL, OIL, AND TIME

Fuel Gasoline Octane 71 Weight per gallon 6.17 pounds

Oil: S.A.E. No. 20 To motor 1.681 gal. Drained from motor 1.560 gal.

Total time motor was operated 37 hours

BRIEF SPECIFICATIONS

Advertised speeds, miles per hour: First 2 1/4 Second 3 5/8

Third 4 3/4 Fourth 10 Reverse 2 7/8

Belt pulley: Diameter 8 1/2" Face 6" R.P.M. 1156 Belt Speed 2574 f.p.m.

Clutch: Make Rockford Type Single plate, dry disc Operated by foot

Seat Pressed steel with sponge rubber pad

Total weight as tested (with operator) 3570 pounds

MOTOR

Make Own Serial No. FAA 1051 Type 4 cylinder, vertical

Head I Mounting Crankshaft lengthwise Lubrication Pressure

Bore and stroke 3" x 4" Rated R.P.M. 1400

Port diameter valves: Inlet 1.187" Exhaust 1.062"

Magneto: Make Own Model H-4

Carburetor: Make Zenith Model 61AX7 Size 7/8"

Governor: Make Own Type Variable speed, centrifugal

Air Cleaner: Make Donaldson Type Oil-washed, wire screen filter

Oil Filter: Make Purolator Type Partial flow, with replaceable bakelite impregnated paper element

Cooling medium temperature control: Pines radiator shutters

CHASSIS

Type Standard Serial No. FAA 1051 Drive Enclosed gear

Tread width: Rear 40" - 68" Front 44", 54", and 64"

Rear tires: No. 2 Size 9 x 24" - 4 ply Air pressure 16 pounds

Front tires: No. 2 Size 4.00" x 15" - 4 ply Air pressure 25 pounds

Added weight: Per rear wheel (Cast Iron 568 pounds
(Water 130 pounds
Per front wheel (Cast Iron 80 pounds

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REPAIRS AND ADJUSTMENTS

No repairs or adjustments.

REMARKS

1. All results shown on page 1 of this report were determined from observed data and without allowances, additions, or deductions. Tests B and F were made with carburetor set for 100% maximum belt horsepower and data from these tests were used in determining the horsepower to be developed in tests D and H, respectively. Tests C, D, E, G, and H were made with an operating setting of the carburetor (selected by the manufacturer) of 92.8% of maximum belt horsepower.

	DRAWBAR	BELT
2. Observed maximum horsepower (tests F & B)	16.32	18.34
3. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	17.35	19.06
4. Seventy-five per cent of calculated maximum drawbar horsepower and eighty-five per cent of calculated maximum belt horsepower (formerly A.S.A.E. and S.A.E. ratings)	13.01	16.20

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 329.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut
Board of Tractor Test Engineers